

Hands-On/Experiential Learning

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Content Overview

1. Rationale: Just do it; must try it out to like it.
2. Theory: learning from simulated experiences helps internalize the skills that will be needed later. Focus on learning misconceptions and buggy algorithms in thinking.



Content Overview

3. Examples: Simulations, science labs, animations, virtual worlds, online cases and scenarios, surveys, action research, tutoring and mentoring, games, Wikibooks, digital movies, Website or portal creation.



Content Overview

4. Other: online debates, mock trials, and role play.
5. Still more examples: recording voice in singing, counseling sessions, practicing language in Skype, exploring archeological sites, etc.



Content Overview

6. Assess application of those skills, problem solving, problem finding etc.
7. Consider the authenticity, credibility, relevance, risk, time, relevance, and learning power of the experience.



Content Overview

8. Some modules may start with an experiential activity and others may end with it.



Examples of Hands-On



Examples of Hands-On

1. Simulations and interactivities: Doctor-patient; counselor-client; teacher-student; coach-player; researcher.
2. Online survey research, collecting real-world data and analyzing it.



Survey Research and Market Analysis (e.g., Mister Poll, MicroPoll, SurveyMonkey, SurveyShare)




Examples of Hands-On

3. Chemistry, biology, and physics labs.
4. Online management and leadership games and simulations.
5. Wikis and wikibooks.
6. YouTube and podcast productions.



Online Chemistry (e.g., virtual lab from Oxford)

Virtual Chemistry




Virtual Experiments (click on the experiments below to launch interactive teaching practicals)

[LiveChem](#)

[Interactive Organic Mechanisms](#)

Nickel (II) Complexes



3DChem.com - A new Mol

LiveChem An online video salt reaction. Nearly 300 v and learn from. Fully inter *NEW* (May 2005)

Named Organic Mechanisms pushing website which all named organic reactions information and points to reaction schemes. *NEW*

Flash Periodic Table *NEW

Webcast Lecture Series C to view lectures in stream them to experience lecture home. *NEW* (Dec 2004)

Interactive Organic Mech assisting in the underst mechanism. *NEW* (Oct)

Pre-University Chemistr chemistry course, chapter

Online Self-Testing (e.g., anatomy and chemistry)

Upper Extremity Muscles



Trunk & Shoulder Muscles



Computer Assisted Learning



2002 CALM Summer Workshop

Click on the following molecules:

- NO_2^+ (Trigonal bipyramidal shape)
- PF_5 (Trigonal bipyramidal shape)
- XeF_2 (Linear shape)
- SO_2 (Bent shape)
- SO_3 (Trigonal planar shape)

Which of these are associated with the depicted shape?

Trigonal planar shape

☐ No

☐ Yes

Business Decision Making (e.g., IT and Leadership)



Simulations (e.g., medical, business, and humanitarian)



Examples of Hands-On

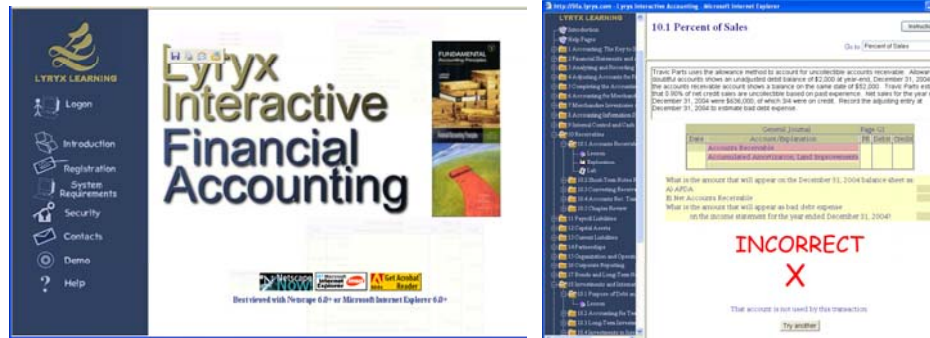
7. Virtual stock exchanges.
8. Online psychology experiments.
9. Virtual worlds (e.g., Second Life) activities and simulations.
10. Online accounting (e.g., Lyryx Learning).



Top Business School Online Competitions (teach energy trading, e.g., Tulane Freeman School of Business)



Interactive Online Accounting

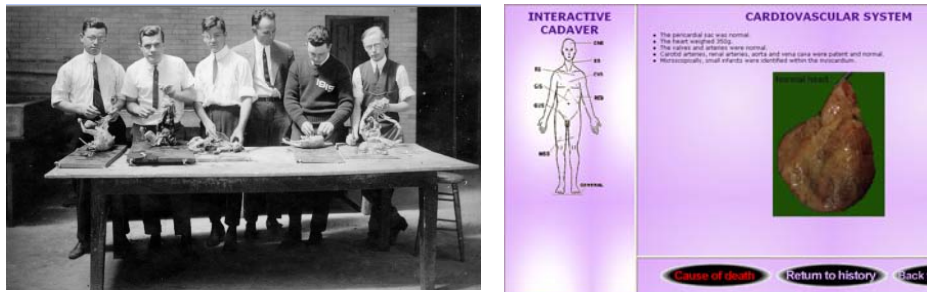


Examples of Hands-On

11. Online anatomy and autopsies (e.g., University of Leicester).
12. Online business cases (e.g., Bized) as well as medical, law, and educational cases.



Medical Cases Analyses



Examples of Hands-On

13. Online psychology, archeology, ancient worlds, etc.
14. Virtual world reenactments (e.g., Shakespeare)



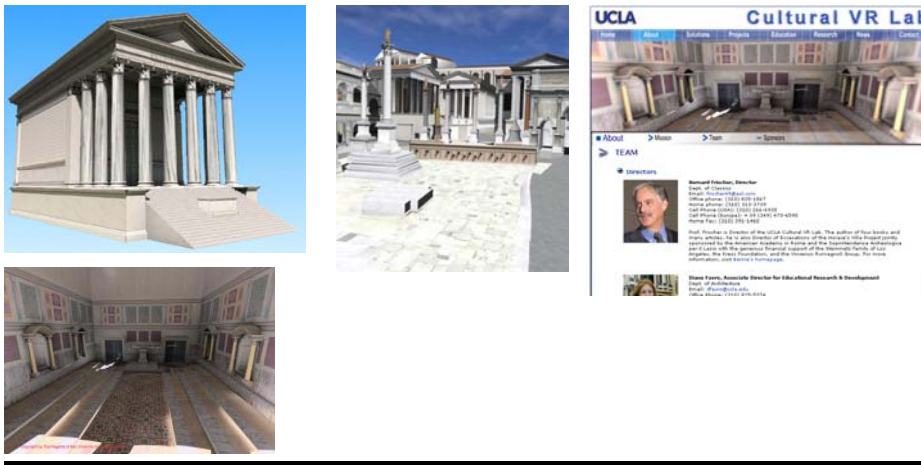
Online Psychology Experiments



Online Archeological Digs



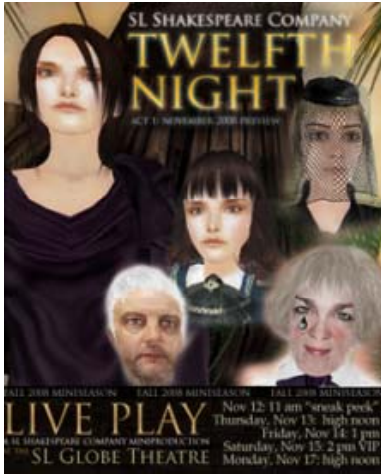
Online Ancient Worlds (e.g., Rome reeborn 1.0)



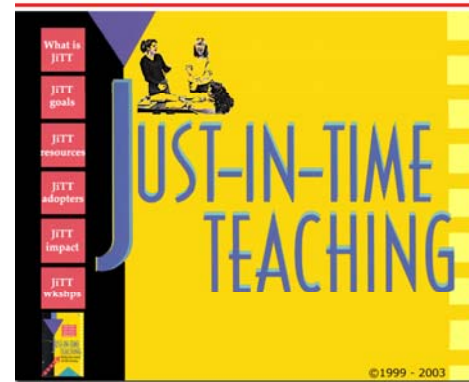
Virtual Crime Scene Analysis



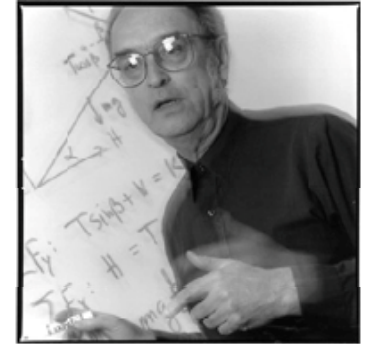
Shakespeare in Second Life



Just in Time Teaching



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Advice and Guidelines

1. Embed reflection activities on the activity (blogs, discussion forums, etc.).
2. Assign students as cool resources providers to find additional hands-on resources.



Advice and Guidelines

3. Conduct team reflections on features that work and are powerful.
4. Set the task goals.
5. Conduct formative as well as summative assessment on the task.



Advice and Guidelines

6. Be aware that online simulations and cases exist in most professional fields (e.g., medicine, education, business, military, etc.).
7. Check to see if the application has different levels of challenges or difficulty.



Advice and Guidelines

8. Does the simulation have expert resolutions, the cases have counter cases, the scenario have alternative paths?
9. Check for ease of navigation and learner control.



Advice and Guidelines

10. Debrief on the activity when done.
11. Explore grant and funding opportunities.



Will your online class be "hands-on?"

For More Information, Contact:

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